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ABSTRACT

Fundamental issues about human nature, such as the origin of sex differences, can only be answered through cross-cultural investigations. Children and adolescents (N=5400) in eight countries (Brazil, England, Italy, Mexico, Yugoslavia, West Germany, and the United States) were studied to determine aptitude, achievement, and several coping and motivational variables. Data included scores from the Raven Progressive Matrices, reading and math achievement scores, and grade point average; educational and occupational aspirations were also assessed, along with coping behaviors. Analyses of variance were conducted to examine sex differences on all the variables. Findings indicated no sex-based differences in aptitude. In general, few, relatively inconsistent sex differences were found in coping skills. Findings related to "view of life" were inconsistent with regard to self-concept and locus of control, although boys in four countries had more positive self-concepts. Boys almost always had higher aspirations than girls on occupational status and educational attainment; however, in Yugoslavia, girls and boys had equal aspirations for educational attainment and occupational status. The results suggest that culture is more important than sex in determining school success and casts doubt on the existence of many universal sex differences. (Author/RC)

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Cross-Cultural Sex Differences: Implications for Education

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Fundamental issues about man's nature such as the origin of sex differences can only be answered through cross-cultural investigation. The present study provides evidence that, in many aspects of life in the classroom, culture is a more important factor to consider than is gender of birth in the psychology of sex differences.

An international study of children in eight countries examined sex differences in aptitude, achievement, and a variety of coping and motivational variables. Results indicate that culture is much more important than sex in determining school success and casts doubt on the existence of many "universal" sex differences.

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Cross-Cultural Sex Differences:
Implications for Education

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Maccoby and Jacklin (1974), in The Psychology of Sex Differences, state that "the sexes are psychologically alike in many respects;" some differences are biological, others not. Triandis (1979) argues that cross-cultural psychology is the only hope for a world which is rapidly shrinking through developments in communication, trade, and transit. Certainly, fundamental issues about man's nature such as the origin of sex differences can only be answered through cross-cultural investigation. The present study provides abundant evidence that, in many aspects of life in the classroom, the culture is a more important factor to consider than is gender of birth in the psychology of sex differences.

Data was collected from nine urban populations: Brazil, England, Italy, Japan, Mexico, Yugoslavia, West Germany, and the two U.S. cities of Austin, Texas and Chicago, Illinois. Subjects were fifty-four hundred children of both sexes, ages 10 and 14, and either upper-lower or upper-middle class SES, in 1965 (Stage I) and 1968 (Stage III). Measures included the Raven Progressive Matrices, reading and math achievement scores, and grade point average. The child's educational and occupational aspirations were assessed (cf. Peck, 1973).

A set of instruments was designed specifically for measuring coping behavior. There were semantically equivalent forms in all the languages, achieved by first developing the instruments in English, then translating them, re-translating them independently ("blind") back into English, and pilot testing in the various countries until only universally usable, semantically equivalent test items remained. These instruments included a Sentence Completion test (SC), a projective measure designed to describe coping behavior; an Occupational Values Inventory (OVAL), to measure preferred characteristics of future work, and its rewards; and the Views of Life (VOL), a measure of numerous, independent aspects of coping, such as locus of control, activity-passivity, independence of thought and action, self-concept, etc.

Factor analyses were performed on each of the instruments. Following the factor analyses a unit weighted score was derived for each factor by standardizing the variables and selecting those variables which loaded significantly on a particular factor. Analyses of variance were done to examine sex differences on all measures.

Aptitude and Achievement

There were no significant, generalized sex differences in aptitude in either Stage I or Stage III. There was no generalized sex difference across countries in mathematics achievement in Stage I although in Stage III, in all countries except Brazil and Italy, the girls outperformed

the boys. Neither in Stage I nor in Stage III was there any systematic sex differences in reading achievement. These findings support prior evidence that the sexes do not differ in aptitude. The failure to find consistent sex differences in the achievement tests argue against traditional, "well-established", findings that girls have greater verbal ability and boys excel in mathematical ability in adolescence (Maccoby & Jacklin, 1974). At any rate, schooling in all of these countries tends to produce a good approximation of sexual equality in the knowledge and skills acquired by the boys and girls. It is all the more interesting, therefore, to find that in Stage III the teachers gave girls higher Grade Point Averages than boys in every country, with an average Sex difference of .2 SD's. Research in America and Western Europe has shown that teachers tend to favor girls over boys (Maccoby & Jacklin, 1974), not because girls necessarily outperform the boys intellectually and academically, but because girls tend to act in more quiet, compliant ways that teachers find easier to live with. Perhaps these same reasons produce the Sex difference in GPA in all of the countries.

Coping Skills

In the first sample, there were universal factors that represent coping with Anxiety, Aggression, Task Achievement, Authority, and Interpersonal Relations. Males scored higher on all but one of the coping factors in all countries, whenever there was a sex difference. All eight countries in Stage I showed sex differences in favor of males in coping with Anxiety. In the second sample, there were even fewer sex differences than in the first sample (Stage I), although males again tended to have better coping scores, in most instances where any sex differences occurred. In general. there were few, relatively, inconsistent sex differences in coping skills.

Views of Life

Several sex differences emerged on the Views of Life instrument. Italy and Japan had many similar significant sex differences. In both countries, females expressed more internal Locus of Control than did males. Females in Italy and Japan were more independent of Authority than males. They also had more Intrinsic work values than males, valuing working for its own sake rather than for the rewards it may bring. In both Italy and Japan, though, females had a less positive Self-Concept than did males. Paradoxically they perceived themselves as being self-reliant and in control, yet they felt less confidence and self-worth than the males. Also, females in England and Brazil had a less positive Self-Concept than did males. These findings support previous evidence that school age children do not show consistent sex differences in Self-Concept and Locus of Control (Maccoby & Jacklin, 1974), although in four countries boys had a more positive Self-Concept than did girls.

Motivation. The most consistent finding across countries on any measure was the finding that boys almost always had higher aspirations both for occupational status and for educational attainment. While this supports traditional socialization for greater achievement in males, even this finding was not present in all countries. In England and Austin, there was no sex difference in educational aspiration. Further, in Yugoslavia girls had equal aspirations with boys for occupational status as well as educational attainment.

Occupational Values

Two basic Occupational Values factors emerged that were quite similar in many countries in both stages. One of these was a factor which involved valuing such intrinsic variables as Altruism, Self-Satisfaction, Intellectual Stimulation and Variety, and not valuing Success, Prestige, and Economic Returns. In Stage I, Austin, Chicago, Italy, England, and Japan all had this factor in common, with females scoring higher in all these countries. In the second sample, females scored higher in all countries except Mexico.

Another factor which occurred in many of the countries involved a desire to Follow Father's Occupation, with less value given to such considerations as Intellectual Stimulation, Variety, Independence, and Associates. In all countries in Stage I, males tended to place greater value on Following Father's Occupation. In Stage III, all countries but Japan, Mexico, and Germany showed the same trend, while females were more interested in intrinsic values.

The combination of these two factors shows a fairly consistent pattern of sex differences that is not unexpected, according to sex-role identification theory (Mischel, 1970). Males tended to place greater value on Following Father's Occupation. Further, they emphasized such extrinsic rewards as Success, Prestige, and Economic Returns, where there was a sex difference. On the other hand, females placed greater value on intrinsic variables such as Altruism, Self-Satisfaction, Intellectual Stimulation, and on Variety, and pleasant Associates, in some countries. The fact that these were not universal, however, and that there were several other sex differences that were not as universal across countries provides more evidence for cultural relativity.

General Implications

The preponderant lack of sex differences, and the fact that girls learn to cope better than boys in some respects, in some societies, would seem to argue that sex differences in coping skills and attitudes are induced by each culture's pattern of traditions, expectations and training for male and female sex roles. Most of these societies seem to train boys to cope better with Anxiety (though not Japan, in the 1968 sample), and some of them train boys to cope better with Aggression and with Authority. Women do not appear to be innately the "weaker sex," when it comes to coping with major problems in life, although they are not trained as well to cope, it would also appear, at certain times, in certain societies. (Pearlin & Schooler, 1978, p. 15).

The career values of boys and girls, and the patterns of attitude and behavior they imply, similarly indicate that sex differences are induced by one's particular culture, not rooted in some unchangeable, presumably biological predisposition. Girls preferred Altruism, Self-Satisfaction and Intellectual Stimulation, while boys preferred Success, Prestige and Economic Returns; but only in four of the eight countries. In almost all countries, girls were even less inclined than boys to Follow their Father's Occupations; but that is scarcely surprising, given the sex-stereotyping of most occupations in all these societies. Even if there should be a sex-based, temperamental tendency for more boys than girls to be active, independent copers, interested in achieving practical success, the evidence from this study shows that cultural conditioning is capable of overriding such a difference.

Although the coping and motivational measures contributed substantially to the prediction of achievement in all countries (Peck et al., 1979), the sex of the child contributes little to the understanding of school success. The predictors of achievement were largely culture-specific, and did not show consistent sex differences. The one variable for which there was a consistent sex difference and which did consistently predict achievement, educational and occupational aspirations, favored boys. However, it is apparent that these aspirations do not lead to substantial achievement differences between the sexes. This evidence supports the argument of Maccoby and Jacklin (1974) that sex is not necessarily a valid indice of concern in psychological or educational research. In this international study, culture was a much more important influence than sex in determining differences between children.

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